REMARKS

The application has been reviewed in light of the Office Action dated September 9, 2005. Claims 1-25 are pending. The Office Action indicates that claims 2-4, 7, 9-11 and 14-25 are allowed. Accordingly, claims 1, 5, 6, 8, 12 and 13 are presented for reconsideration, with claims 1, 6 and 8 being in independent form. By this Amendment, the specification has been amended.

Claims 1, 6 and 8 were rejected under 35 U.S.C. §102(b) as purportedly anticipated by Japanese Patent Application Publication No. 11-122490 (Kazumasa).

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claims 1, 6 and 8 are patentable over the cited art, for at least the following reasons.

This application relates to performing appropriate shading correction of image data for an abnormal pixel. Conventionally, image processing apparatuses which obtain optical information from optically scanning a document using an image sensor typically perform a shading correction to correct for a sensitivity of the image sensor, and obtain standard shading correction data from reading a white plate. However, if there is dirt on the white plate or somewhere in the optical path, degraded image data may be obtained from reading the white plate.

As proposed on page 16 of the present application, this problem can be overcome by an approach in which a value for an abnormal pixel is set as a standard shading data for a pixel which requires a pixel correction computation in a stage prior to the original document reading mode. A value corresponding to a peak value of standard shading data (for example, 0.9 x peak value) is set as the standard shading data for a pixel in a region where the pixel cannot be corrected, namely, in a region where the number of successive abnormal pixels exceeds an allowable correction number.

Kazumasa (Japanese Patent Application Publication No. 11-122490), which is discussed

in the Background section of this application, proposes an approach for handling degradation

caused by dirt or fouling in an image reading apparatus. The image reading apparatus of

Kazumasa includes (a) an abnormal pixel detection section for detecting an abnormal pixel in the

white image data obtained by reading a white plate, (b) a diagnose section for determining

whether the abnormal pixel is caused by dirt on the white plate, and (c) an abnormal pixel

correction section.

Kazumasa proposes that detection of the abnormal pixel is performed by reading a white

plate for shading corrections, and a correction of the abnormal pixel is made directly on image

date obtained by reading an original document (see Kazumasa, paragraphs [0030] and [0055]).

Kazumasa proposes that for a detected abnormal pixel which is determined to be caused by dirt

of the white plate, the abnormal pixel correction section corrects the shading correction data to be

a combination of shading correction data of adjoining pixels (see Kazumasa, paragraph [0014]),

and for a detected abnormal pixel which is determined to be caused by factors other than dirt on

the white plate, the image data for the abnormal pixel is adjusted to be a combination of the

image data of adjoining pixels.

In contrast, independent claim 1 of the present application provides that a previously

specified value is stored for use as the standard white image data for the pixels that are

determined to be abnormal by said abnormal white image pixel detection device. That is, a

predetermined value corresponding to the peak value of standard shading data is set as a standard

shading data when a pixel which is a standard for shading correction is determined to be

abnormal.

Kazumasa discloses use of a threshold (Th) for judging whether the white image data for

a pixel is abnormal.

Kazumasa simply does not teach or suggest, however, that a previously specified value is

stored for use as the standard white image data for the pixels that are determined to be abnormal by said abnormal white image pixel detection device, as provided by independent claim 1.

Independent claims 6 and 8 are patentably distinct from the cited art for at least similar reasons.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 6 and 8, and the claims depending therefrom, are patentable over the cited art.
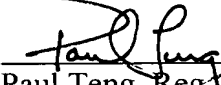
Applicant appreciates the Examiner's statement of reasons for allowance in the Office Action and submits that the allowed claims recite subject matter which further supports patentability for reasons in addition to those identified in the Examiner's statement of reasons for allowance in the Office Action.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance. Accordingly, Applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Office is hereby authorized to charge any fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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